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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,144	12/29/2000	Steve Lewontin	730.39161X00	6775

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EXAMINER

NGUYEN BA, PAUL H

ART UNIT	PAPER NUMBER
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2176

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DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,144

Applicant(s)

LEWONTIN, STEVE

Examiner

Paul Nguyen-Ba

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/24/03.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Notice to Applicant

1. This action is responsive to Information Disclosure Statement filed on July 24, 2003.
2. Claims 1-19 have been considered. Claims 1 and 10 are independent claims.
3. If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that the copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge does not apply.

Oath/Declaration

4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because it does not identify the citizenship of each inventor.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin et al. ("Rubin"), U.S. Patent No. 6,567,815, in view of Call, U.S. Patent Application Publication No. 2002/0143521.

Independent Claim 1 and Claims 2, 3, 7-9

Rubin discloses a method of *compact storage of data structures in computer memory* (see Abstract and col. 1, lines 6-7; col. 2, lines 63-67; col. 5, lines 57 *et seq.*), the method comprising:

providing a *virtual node tree* describing the *structure of the data types*, with each one of the *nodes* in the virtual node tree respectively *corresponding to one element of a specific data type* in the document (see Figs. 3, 5, 6; see also col. 2, lines 42-62; col. 3, lines 8-24);

for each one of the nodes in the virtual node tree, providing a *data array* including information identifying the *relationship of the node to other nodes (indicated by a child index and a sibling index* → see Figure 3; col. 5, lines 65 *et seq.*) in the virtual node tree and a *reference indicating the location* of the data corresponding to the node (col. 2, lines 42-62; col. 3, lines 8-24); and

obtaining, by a set of software components, the data corresponding to the nodes using the reference included in the data array (col. 3, lines 34 et seq. → “computer software product” provides a “data retrieval system” for accessing one of the nodes in the predefined area of memory according to the index associated therewith).

Rubin does not specifically disclose representing a *document structure written in a markup language*, wherein the data arrays have a *fixed or variable length*.

However, Call discloses fixed and variable length data as an addressable array to provide efficient data manipulation functions typically performed by hierarchical object oriented data systems, including systems conforming to the Document Object Model widely used for storing and manipulating XML and HTML character data (pg. 2 – [0016] and [0017]) for the purpose of compact data representation to preserve storage space (pg. 2 – [0013]).

Since Rubin and Call are both from the same field of endeavor, the purposes disclosed by Call would have been recognized in the pertinent art of Rubin. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Rubin with the teachings of Call to include the representation of a document structure written in a markup language, wherein the data arrays have a fixed or variable length for the purpose of compact data representation to preserve storage space.

Claim 4

Rubin discloses the method explained with respect to claim 1 above, but does not specifically disclose data arrays including a flags field.

Art Unit: 2176

However, Call discloses the use of flags to uniquely identify a selected rule in a manner tailored to the needs of the portion of the XML document (pg. 24 – [0362]) for the purpose of signaling a particular condition or status.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Rubin with the teachings of Call to include the use of flag fields to uniquely identify a selected rule in a manner tailored to the needs of the portion of the XML document (pg. 24 – [0362]) for the purpose of signaling a particular condition or status.

Claim 5

Rubin discloses the method explained with respect to claim 4 above, but does not specifically disclose the method wherein a flag in the flags field and identifies the type of the node data.

However, Call discloses that the header information for each node identifies the data type of the node (pg. 24 – [0368]; see also Figure 6).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Rubin with the teachings of Call to include the use of flag fields to uniquely identify the data type of the node for the purpose of signaling a particular condition or status of the data.

Claim 6

With respect to claim 4 above, Rubin further discloses the method of indicating whether or not the node is the last sibling in a list of siblings (see Figure 3, 5, and 6; col. 5, lines 65 *et*

Art Unit: 2176

seq. → the position of a node can be calculated by its arrangement in the data array respective to its siblings).

7. Claims 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rubin et al. ("Rubin"), U.S. Patent No. 6,567,815, in view of Call, U.S. Patent Application Publication No. 2002/0143521, in further view of Van Ee, U.S. Patent Application Publication No. 2002/0143521.

Claims 10-19

Rubin, in view of Call, does not specifically disclose a *mobile phone* comprising a set of software components; a memory connected to the set of software components; and a display comprising a browser, wherein at least one of the set of software components carries out the method explained with respect to claims 1-9 above.

However, Van Ee discloses a mobile phone that has a display comprising a browser capable of retrieving a Web page from the Internet for the purpose of browsing the Web with a display of limited size and a mobile phone with limited memory (see Abstract and Figures).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate the teachings of Rubin, in view of Call, with the teachings of Van Ee to integrate the method of compact tree representation, explained in claims 1-9 above, to a mobile phone that has a display, comprising a browser capable of retrieving a Web page from the Internet for the purpose of browsing the Web with a display of limited size and a mobile phone with limited memory.

Art Unit: 2176

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6675351 B1 USPAT 20040106 Leduc, Kevin

WO 200221291 A PCT 20020314 SEDGHI, A R

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Nguyen-Ba whose telephone number is (703) 305-8776. The examiner can normally be reached on 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (703) 305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PNB


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER